FULBRIGHT

KOMMISSION

Fulbright-Cottrell Award

Bundesministerium
für Bildung
und Forschung

RESEARCH CORPORATION
for SCIENCE ADVANCEMENT

FULBRIGHT

Unique Young Research Award **->** integrated **teaching & research** philosophy

2016 -> 1st Fulbright Cottrell Award

1994

Characteristics:

- Annual Prize

- Two young researchers in Germany

(advanced post-docs, group leaders, "habilitants" junior professors)

- Fields: Chemistry, Physics, Astronomy and Biochemistry

- **Flexible 63,000 EUR** for 3-year project that combine innovative **research AND teaching**

- **5,000 EUR** for Cottrell Conference in Tucson, Arizona -> networking with the Cottrell Awardee

Cottrell Scholars

Cottrell Scholars

The Cottrell Scholar program develops outstanding teacher-scholars who are recognized by their scientific communities for the quality and innovation of their research programs and their academic leadership skills.

Sebastian Salma, 2016 class

Fulbright-Cottrell Award Application

Application form -> 20 pages in total

- **Personal** & **work** contact **information**

- **Title** of the proposal (130 characters)

- **Abstract** (including both research & teaching proposal; max. 250 words)

- Education and experience -> **CV**

- **Publications** of the last 5 years -> highlighting **independent work**

- **Financial** support

- **Research proposal** (approximately 3 pages)

- **Teaching proposal** -> treat it as a research proposal

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- Finding a GAP
- State of the art
- Detailed plan -> milestone
- References

- **Teaching proposal** -> assessment plan

- **Teaching proposal** -> collaborators

Advices

- Samples of educational proposal in the Research Corporation webpage
- Identify a Cottrell or Fulbright-Cottrell Awardee in a similar field and ask him/her


Jen Heemstra

Emily Balskus

*"Much of **life** can be **understood in rational terms** if expressed **in the language of chemistry**. It is an internatiional language, a language for all of time, and a language that explains where we came from, what we are, and where the physical world will allow us to go."*

Arthur Kornberg, 1987

<u>Statement of the problem:</u>

- **Chemistry education** is still too **tightly bound to disciplinary division** ⟶ segregation ⎰ -disciplines / -courses / -lectures / -laboratories
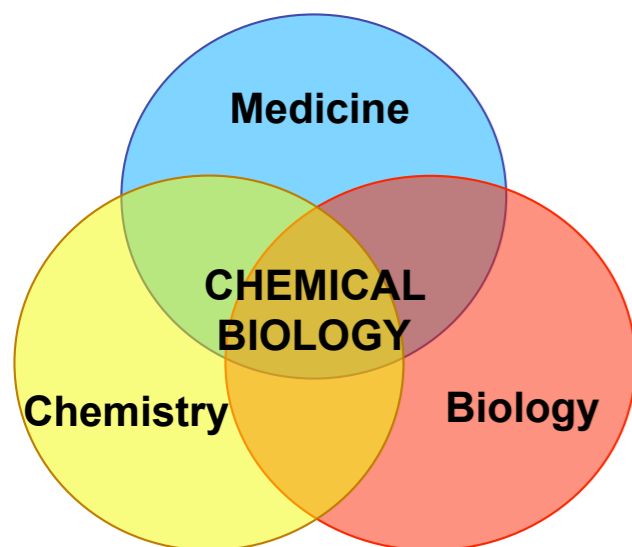
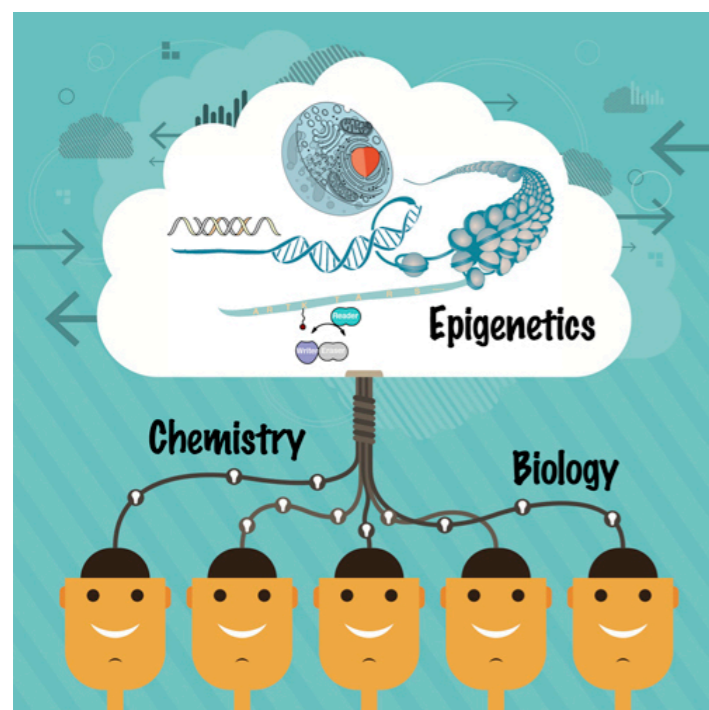- **Students** mostly act as a **purely passive subject**

Idea:

- **Interdisciplinary**, **active learning course** in a chemical biology **topic integrated into my research**

(*epigenetics*)
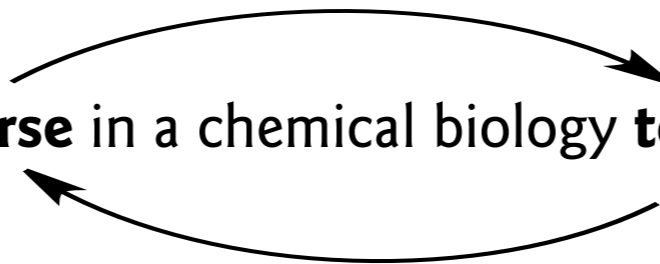
Plan:

- Master course for **chemists and biologist** (10 students)

- **Basic concepts** of epigenetics together with the **cutting-edge applications** under **molecular viewpoint**
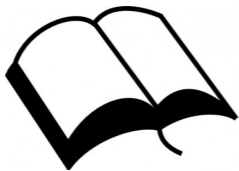

Goals:

- **Interaction** of students from different disciplines -> **networking**

- Supplying chemical tools -> **increase their curiosity for chemistry**

- **Biological concepts** -> "I can apply my chemistry in such scenario!"

Structure:

- *Lecture classes*: (10%)
  - Scientific Writing Notions
  - Basic Epigenetic Concepts

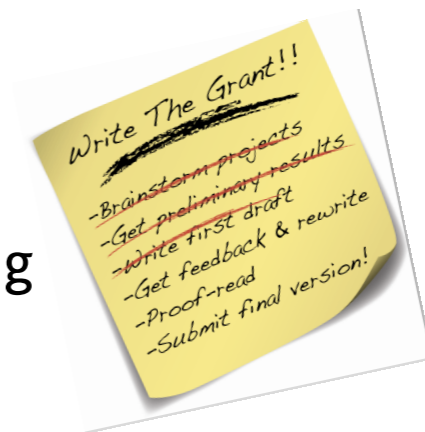- *Lectures integrated with research inspired lab* (70%)

  -> Writing a **short communication** as for scientific journal

- *Scientific proposal* (20%) -> science needs funding!

  Groups of 3 students -> freedom but with guidance and tutoring

  Present their ideas as a poster in front of other professors

  Write The Grant!!
  - Brainstorm projects
  - Get preliminary results
  - Write first draft
  - Get feedback & rewrite
  - Proof-read
  - Submit final version!

Dream Educational Outcome

- **Meaningful learning** with **training** (goals)
- Understanding, creating, **independent thinking**
- Improving **oral, writing and argumentation skills**
- **Values**: team work, collaboration, cooperation, respect
- **Enthusiasm for science**

- **Teaching proposal** -> treat it as a research proposal

        - Finding a GAP

        - State of the art

        - Detailed plan -> milestone

        - References

- **Teaching proposal** -> assessment plan

- **Teaching proposal** -> collaborators

- List of **reviews** -> insider & outsider

What has Fulbright-Cottrell given to me?
Reflection

- **Prize** -> possibility to do my project, prestige, visibility, etc

- **Networking** (friendship) with **terrific people** in **Germany & USA**